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XIV.—MANGLE.

The Sum of FIVE POUNDS was this Session given to Mr. JONAS THURRELL, 2, Little King-street, Camden-town, for his mode of producing the alternate motion of a MANGLE Box. A Model of the same has been placed in the Society's Repository.

2, Little King-street, Camden-town,

SIR;

March 27, 1827.

I WILL thank you to lay before the Society of Arts, &c. the accompanying model of a new and simple method of producing the alternate motion of a mangle-box, by turning the handle continually in the same direction.

I am, Sir,

A. Aikin, Esq.

&c. &c. &c.

Secretary, &c. &c.

JONAS THURRELL.

Reference to the Figures.—Plate II.

Fig. 1, *a a* the mangle-box; *b b* parts of the frame which support the axis *c c*; *d* the cranked handle; *e* and *f* two barrels loose on the axis *c c*; to the barrel *e* are fastened two cords, one of which, after making several coils round the barrel, passes from its *under* side to the eye *h*, where it is secured, while the other, after having in like manner coiled round the barrel, is also delivered from its *under* side to the eye *g*. To the barrel *f* are also fastened two cords which being delivered from the *upper* side of the barrel, are respectively fixed in the eyes *i* and *j*. The part *k* of the axis between the barrels is made square, and is cut out longitudinally, to receive the lever *l*, which is secured in its place by a pin, but so as to allow of lateral motion between the two barrels; each of

these barrels has a stud m and n , so placed that the lever may be shifted to engage either of them, and consequently, to oblige that barrel with which it may be engaged to revolve together with the axis ; o and p are two alternating irons, each with an eye at one end, through which a pin q passes, in order to fasten them to the mangle box ; their height above the box is such as to allow them just to clear the axis when passing under it, and the motion of each is limited, but on opposite sides, by the adjusting pins $r r$.

The figure represents the lever l as engaged with the stud n , and consequently, as fixing the barrel e ; now if the handle is turned so as to wind up the cord h , the cord g will proportionally unwind, and the mangle box will move from left to right, till the end l of the lever comes in contact with the alternating iron at the point o . By continuing to turn the handle, the end of the lever slides from o to the end of the iron, and is brought into the position shown by the dotted lines ; the stud n is consequently disengaged, and the barrel e becomes loose ; at the same time the lever engages the stud m , and fixes the barrel f . The handle being still turned in the same direction as at first, begins to wind up the cord i , and thus makes the box begin to move from right to left, the cord j at the same time unwinding proportionally. When the left hand alternating iron has begun to come under the axle, the end of the lever will touch it at p , will slide along it to the point of the angle, and in so doing will bring it to the position shown in the figure, the barrel e being now fixed, and the barrel f being loose. Thus is accomplished the production of an alternating motion of the box, by continuing to turn the handle always in the same direction.

The back of the lever l is bevelled off, so that if the handle is turned in a wrong direction, it passes between

the studs *m* and *n*, and, not engaging either barrel, produces no motion of the mangle-box.

Fig. 2, one of the barrels separate.

Fig. 3, the square middle part of the axis, showing the slit in which the lever traverses.

XV.—CAP FOR A MALT-KILN.

The LARGE SILVER MEDAL was this Session presented to Mr. WILLIAM HENRY PERKINS, of Stanstead, Herts, for his CAP FOR A MALT-KILN; a Model of which has been placed in the Society's Repository.

SIR;

Stanstead, Herts, November 1, 1826.

HAVING made a considerable improvement in Malt-kilns, by substituting a cap, in place of the usual cowls, I shall be glad to obtain the approbation of the Society of Arts, and will attend with a complete model thereof, on being favoured with notice when the subject will be taken into consideration.

I am, Sir,

A. Aikin, Esq.

&c. &c. &c.

Secretary, &c. &c.

Wm. HENRY PERKINS.

The common cowl of a malt-kiln is a long, somewhat conical, cap, open at one side, and having the vane or arm so fixed, that, as the wind shifts, the cowl shall turn on its spindle, and always present the boarded or closed side to the weather. This prevents drifted rain from beating in; but in showers, when the wind is still, the wet readily finds its way in: this, if the floor is loaded with malt,